

WHAT IS CLAIMED IS:

1           1. A method in a cellular telecommunications  
2 network of constructing a list of cells comprising at  
3 least one cell in which network resources are to be  
4 allocated to perform a requested service, said method  
5 comprising the steps of:

6           determining each particular cell's capability to  
7 provide the requested service; and

8           building a cell list comprising only cells that can  
9 provide the requested service.

1           2. A method in a cellular telecommunications  
2 network of allocating network resources to perform a  
3 requested service, said method comprising the steps of:

4           determining each particular cell's capability to  
5 provide the requested service prior to allocating network  
6 resources in that cell; and

7           allocating network resources only in the cells that  
8 can provide the requested service.

1           3. The method of allocating network resources of  
2 claim 2 further comprising, before the step of allocating  
3 network resources, the step of building a cell list  
4 comprising only cells that can provide the requested  
5 service.



1           7.    The method of allocating network resources of  
2   claim 6 further comprising the steps of:

3               determining that the mobile station did not respond  
4   to the paging in the PA;

5               building a cell list for a service area (SA)  
6   comprising only cells that can provide the requested  
7   service; and

8               paging for the mobile station only in the cells of  
9   the SA that can provide the requested service.

1           8.    A system for constructing a list of cells  
2   comprising at least one cell in which network resources  
3   are to be allocated to perform a requested service, said  
4   system comprising:

5               a capabilities database that stores information  
6   identifying each particular cell's capability to provide  
7   each of a plurality of services;

8               a processor that compares the requested service to  
9   the information stored in the capabilities database for  
10   each cell in order to determine each cell's capability to  
11   provide the requested service; and

12              a resource controller that builds a cell list  
13   comprising only cells that can provide the requested  
14   service.

1           9.    A system for allocating network resources in a  
2   cellular telecommunications network to perform a  
3   requested service, said system comprising:

4           a capabilities database that stores information  
5   identifying each particular cell's capability to provide  
6   each of a plurality of services;

7           a processor that compares the requested service to  
8   the information stored in the capabilities database for  
9   each cell in order to determine each cell's capability to  
10   provide the requested service; and

11          a resource controller that allocates network  
12   resources only in the cells that can provide the  
13   requested service.

1           10.   The system for allocating network resources of  
2   claim 9 wherein the network resources are paging  
3   resources for paging a mobile station, and the  
4   capabilities database stores information identifying the  
5   capability of each particular cell in a location area  
6   (LA) to provide each of the plurality of services.

1           11.   The system for allocating network resources of  
2   claim 10 wherein the processor compares the requested  
3   service to the information stored in the capabilities  
4   database for each cell in the LA in order to determine

5 the capability of each cell in the LA to provide the  
6 requested service.

1 12. The system for allocating network resources of  
2 claim 11 further comprising a cell list database that  
3 stores cell lists comprised only of cells that can  
4 provide the requested service.

1 13. The system for allocating network resources of  
2 claim 12 wherein the cell list database includes:  
3 a cell list comprised only of cells in the LA that  
4 can provide the requested service;  
5 a cell list comprised only of cells in a paging area  
6 (PA) that can provide the requested service; and  
7 a cell list comprised only of cells in a service  
8 area (SA) that can provide the requested service.

1 14. The system for allocating network resources of  
2 claim 13 further comprising a paging mechanism that  
3 retrieves the cell list for the LA from the cell list  
4 database and pages for the mobile station only in the  
5 cells of the LA that can provide the requested service.

1           15. The system for allocating network resources of  
2       claim 14 wherein the paging mechanism determines whether  
3       the mobile station responded to the paging in the LA, and  
4       if not, retrieves the cell list for the PA from the cell  
5       list database and pages for the mobile station only in  
6       the cells of the PA that can provide the requested  
7       service.

1           16. The system for allocating network resources of  
2           claim 15 wherein the paging mechanism determines whether  
3           the mobile station responded to the paging in the PA, and  
4           if not, retrieves the cell list for the SA from the cell  
5           list database and pages for the mobile station only in  
6           the cells of the SA that can provide the requested  
7           service.

1           17. The system for allocating network resources of  
2       claim 11 wherein the processor includes programming to  
3       compare the requested service to the information stored  
4       in the capabilities database for each cell in the  
5       network's service area in order to build a cell list for  
6       each LA in the service area, a cell list for each paging  
7       area (PA) in the service area, and a cell list for the  
8       entire service area, each of the cell lists comprising  
9       only cells that can provide the requested service.